



AIRS

Checkout 08/01/2002 net meeting

Larry McMillin
Climate Research and Applications Division
National Environmental Satellite, Data, and
Information Service
Washington, D.C.

Larry.McMillin@noaa.gov



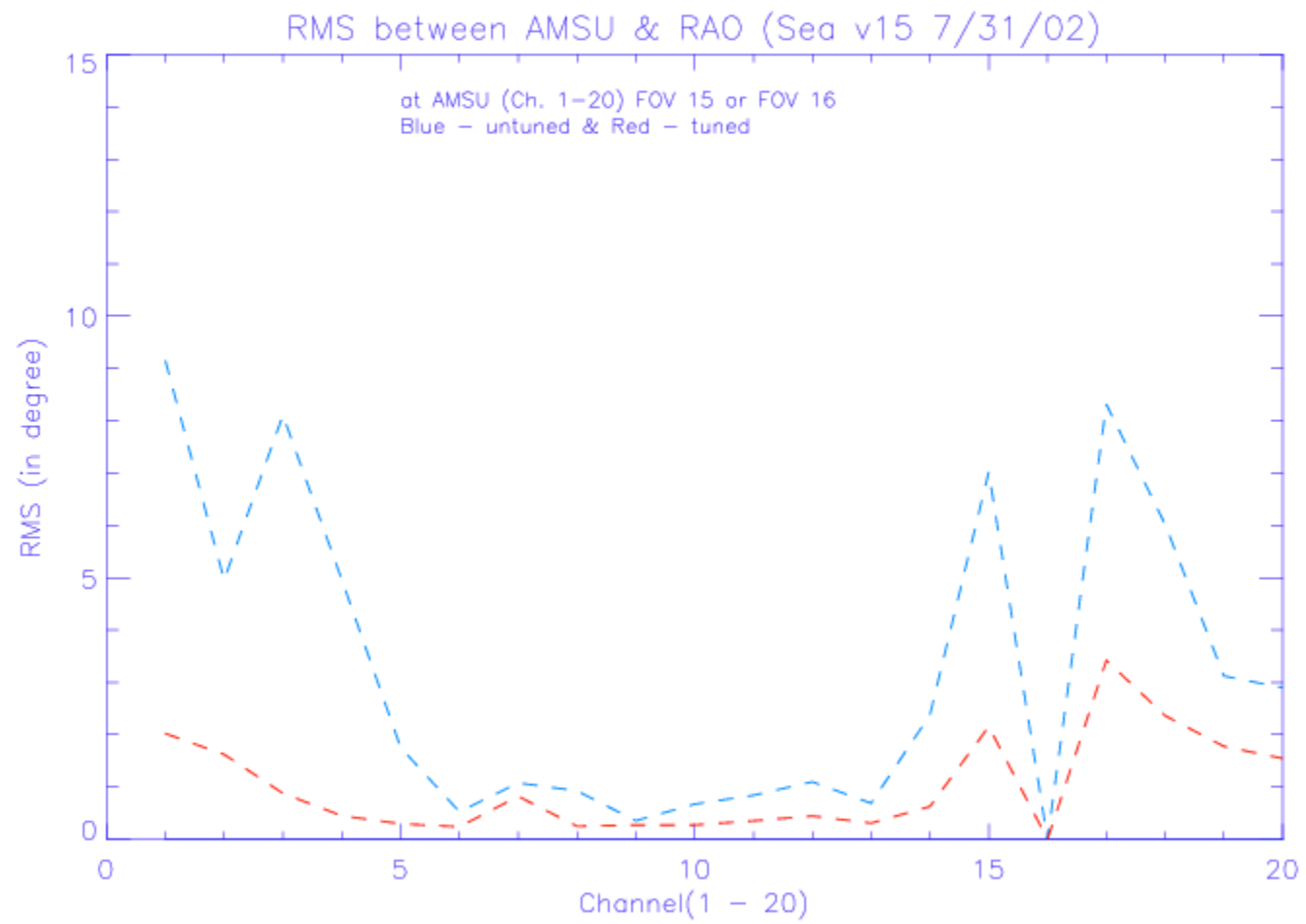
AMSU Tuning

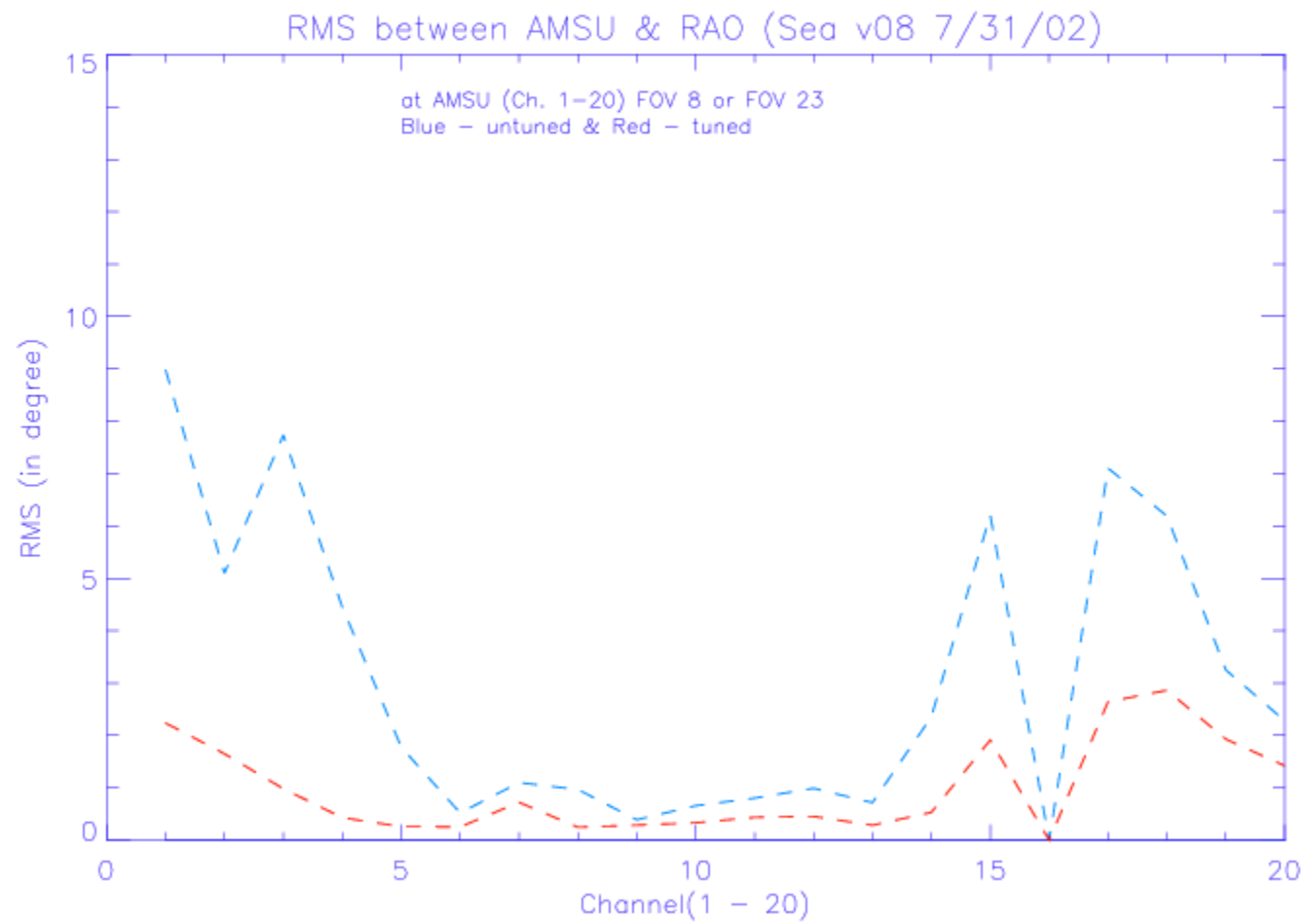
- AMSU tuning has been run
- We find reasonable agreement for upper level channels
- We are concerned about the agreement for the lower channels
- We are checking out some code issues to make sure that everything is consistent

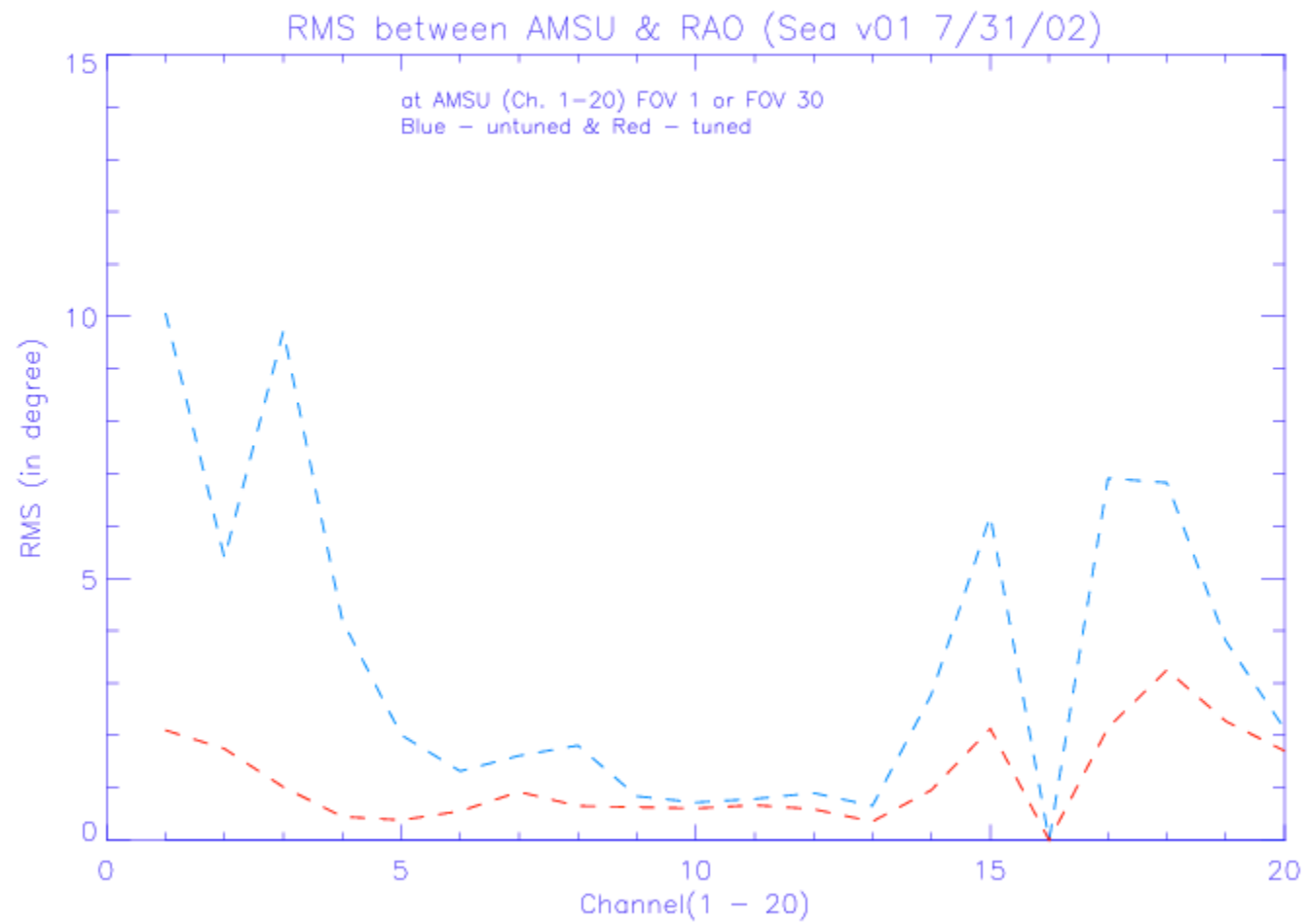


Tuning results

- The next slides show the tuning results for 3 scan angles
 - 8/23, 15/16, 1/30
 - They go from nadir to the maximum angle
 - The profiles are similar except for an expected trend to get larger with larger scan angles









Clear Filter

- Consistency - done
- Approach - all done on a selected channel - 795.845
 - Find all the local maxima and mark as clear
 - Iteratively, for each clear spot, find all the adjacent spots that are within 0.25 K and mark as clear
 - Set all single clear spots (no adjacent clear) to cloudy
 - Set all spots that have x adjacent spots that differ by more than 0.65 to cloudy
 - Repeat for other channels with different limits - 937.807 & 1016.516
 - Require all channels to indicate clear
- Approach - Statistical - being done
 - Set all clear value to 1 and cloudy to zero
 - Predict the cloud flag from all the channels
 - Iteratively tune the procedure



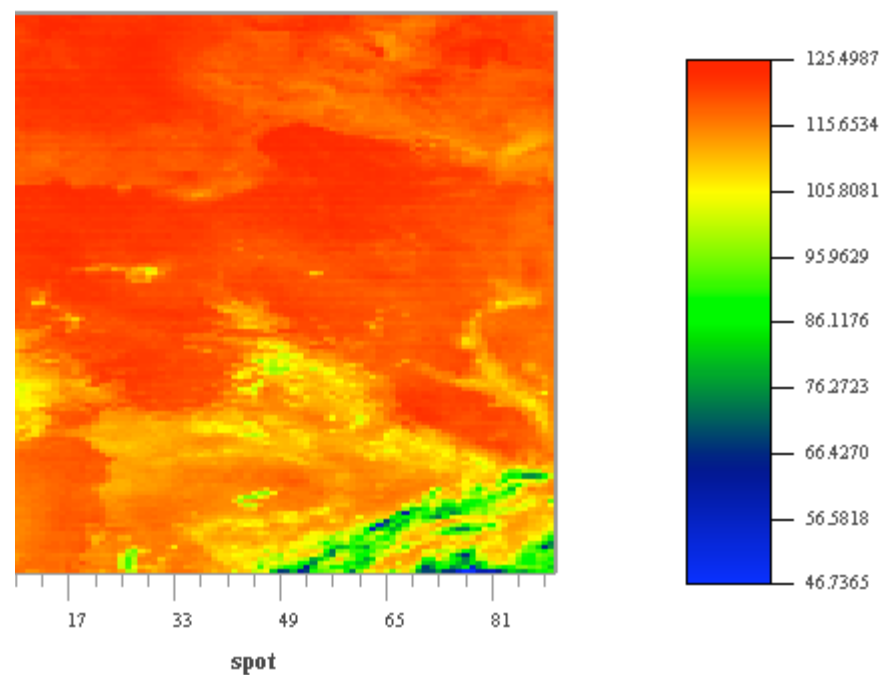
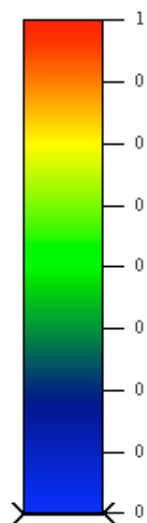
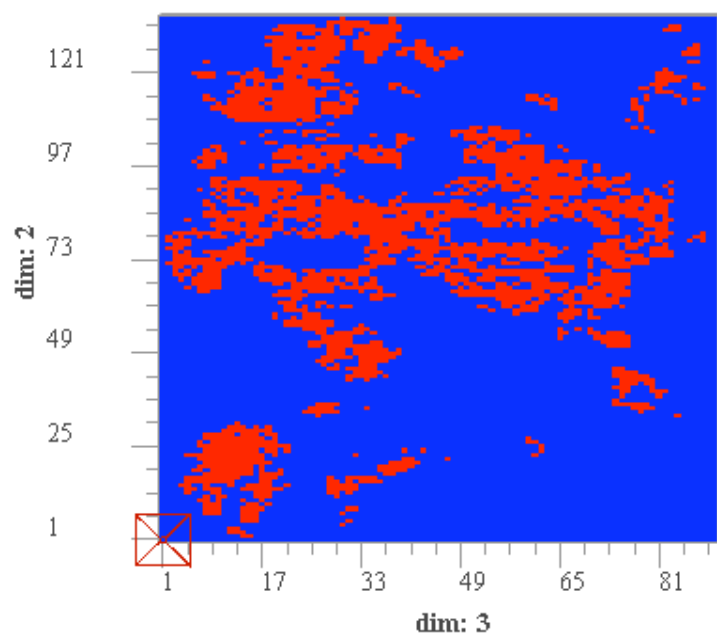
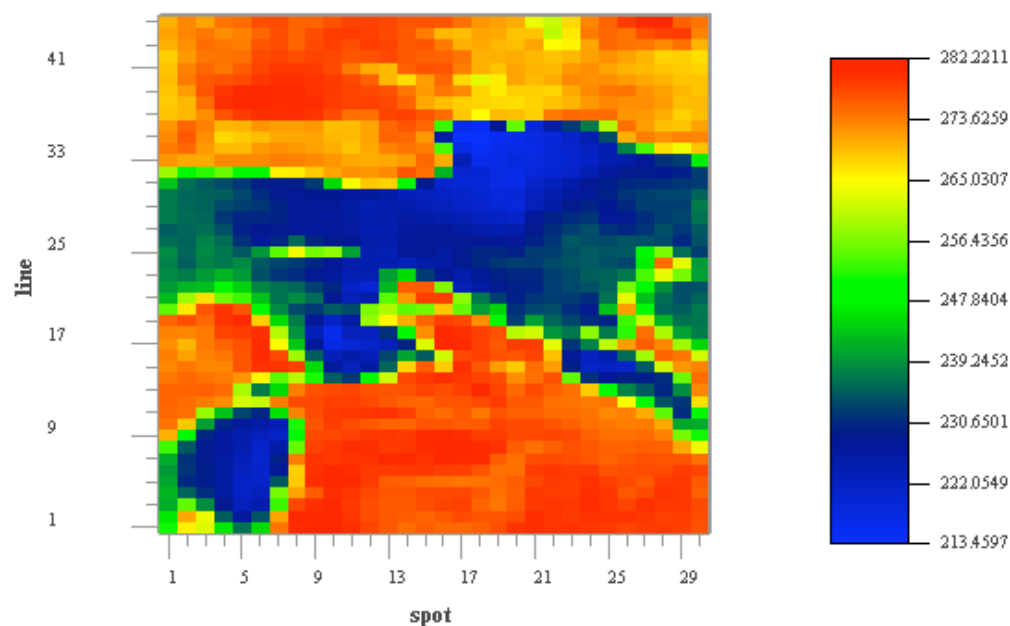
Clear filter summary

- Number of clear values by granule
- Gran. number
- 005 2666
- 021 565
- 089 599
- 090 330
- 115 1410
- 116 271
- 212 571
- 236 904



g005 AMSU

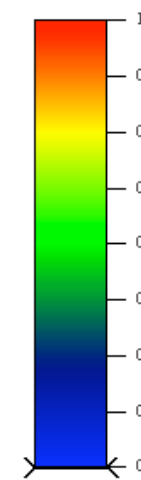
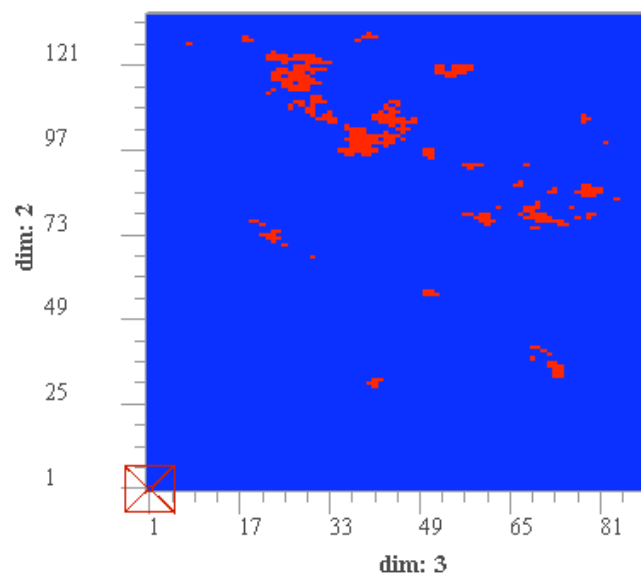
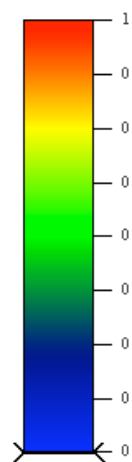
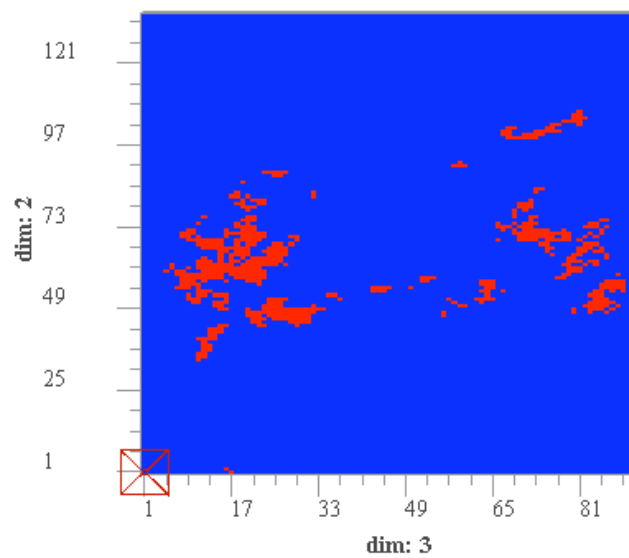
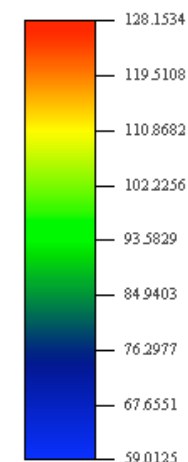
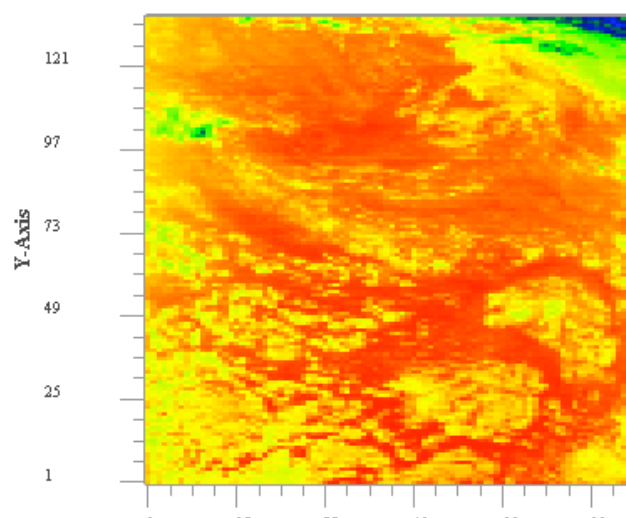
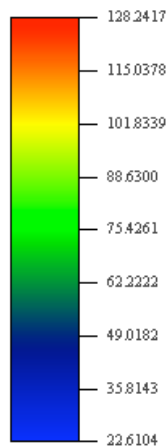
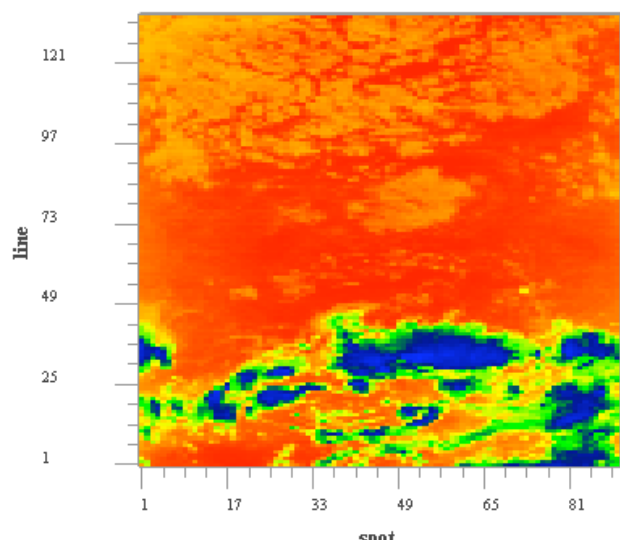
Clear AIRS





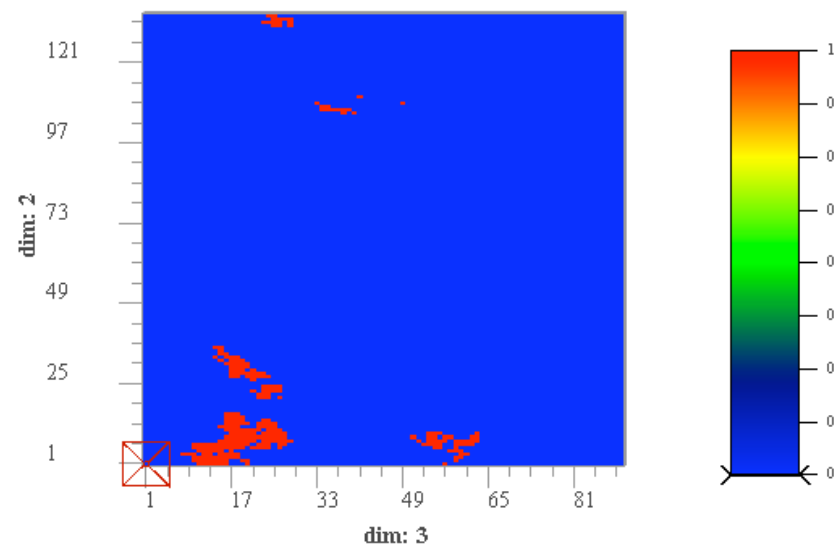
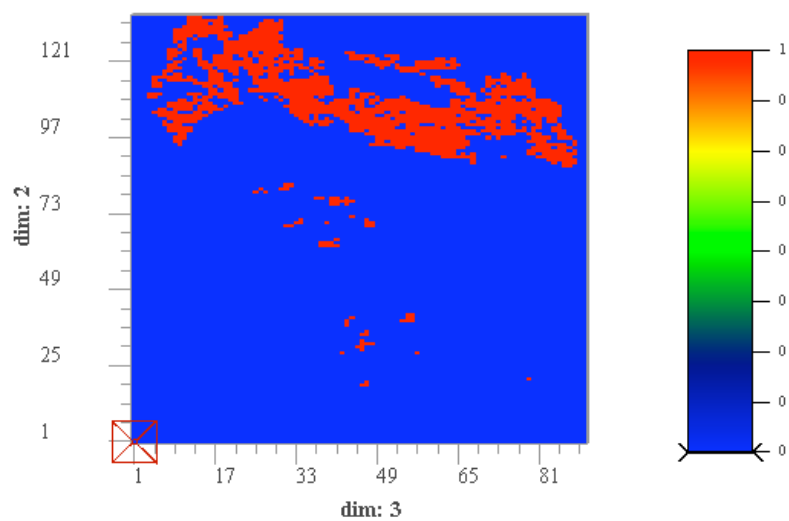
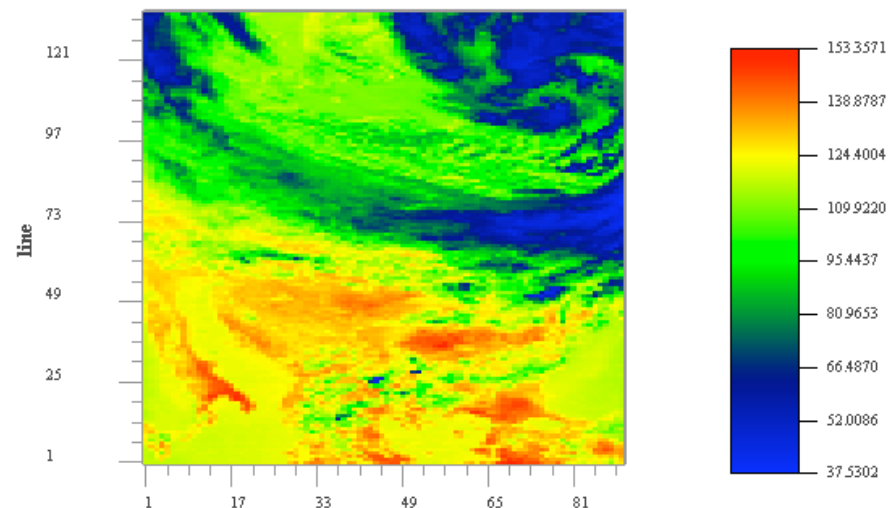
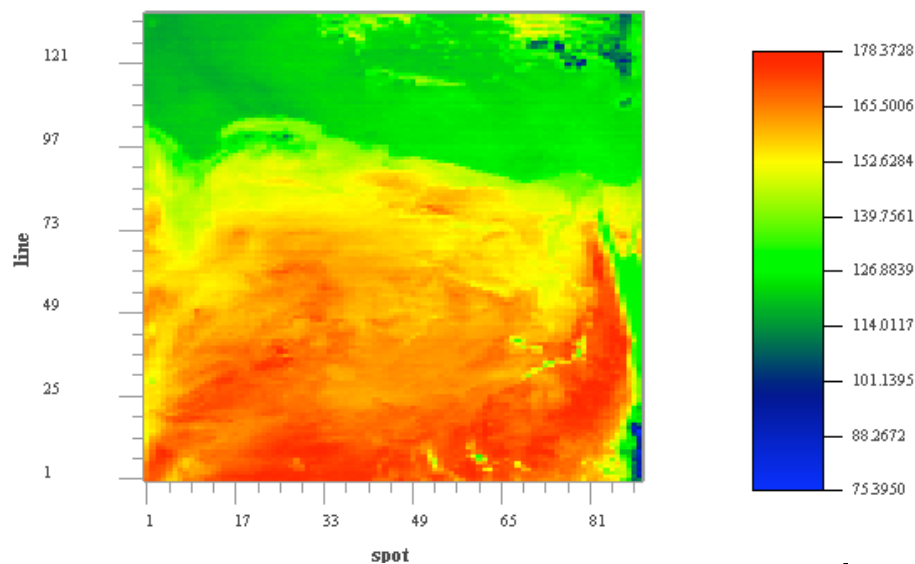


Chan. 375(117) and clear for G 089 & 090



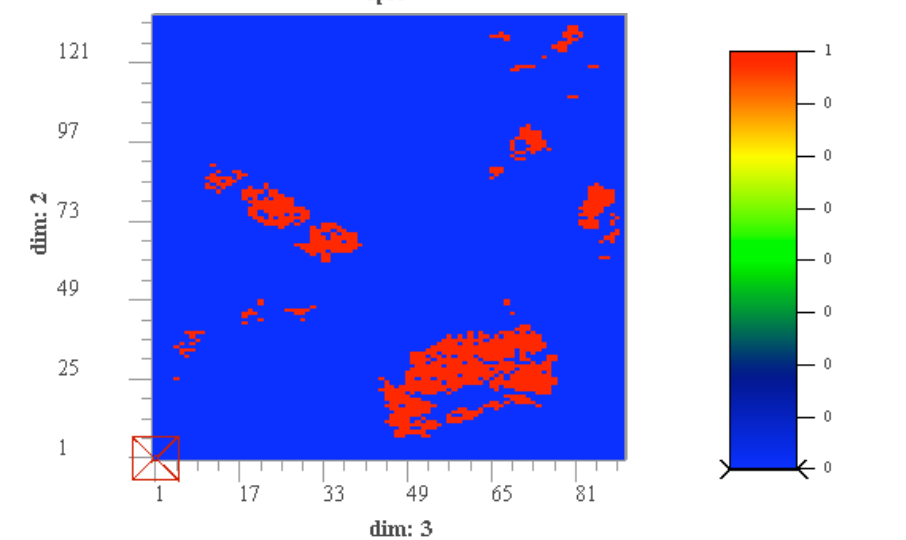
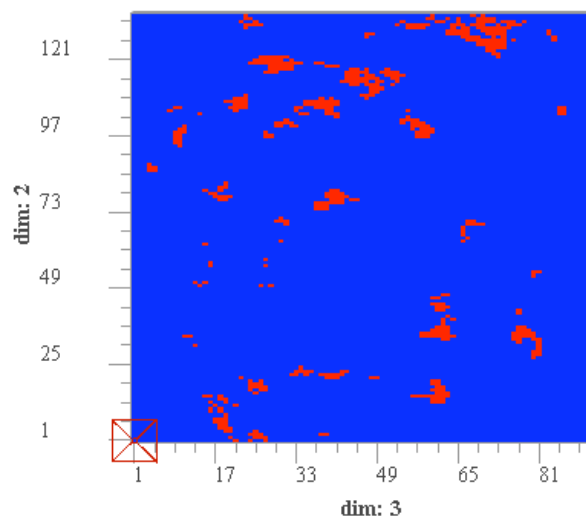
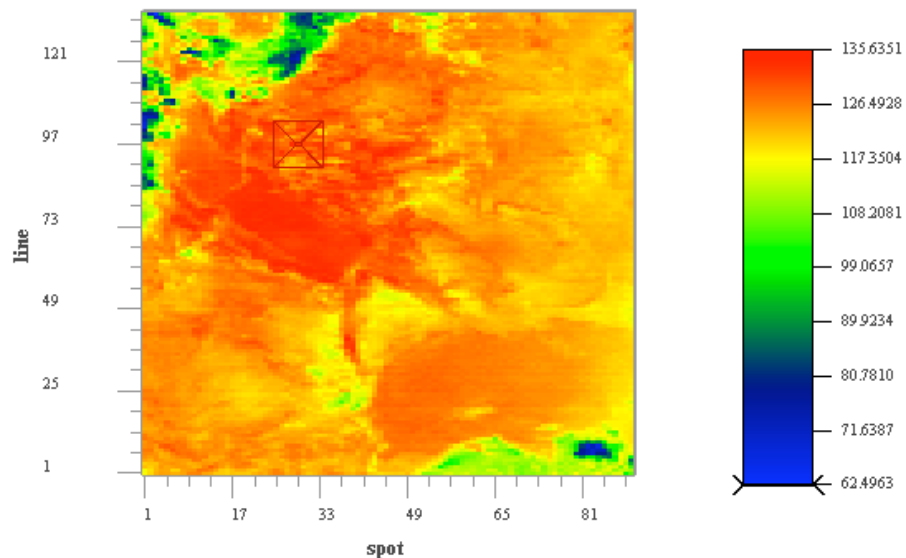
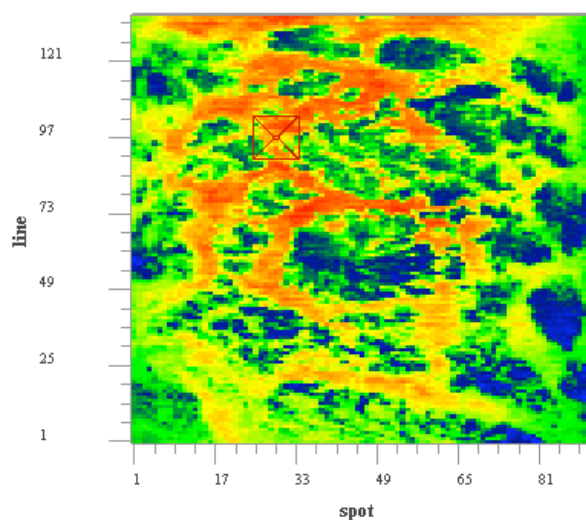


Chan. 375(117) and clear for G 115 & 116





Chan. 375(117) and clear for G 212 & 236





Summary

- Preliminary tuning is done but need to verify a couple issues before releasing.
- Preliminary clear detection scheme based on local consistency works well.
- We are looking at noise in both AIRS and AMSU, but this has been the third priority. We have noted some interesting along track – cross track differences AIRS in noise that we are investigating.